EPA Grant

REGIONAL COUNCIL ATTACHMENT #3.1.3
Thursday, June 5, 2003

REPORT

DATE: May 14, 2003

TO: Administration Committee Members
Regional Council Members

FROM: Ashwani Vasishth, Associate Regional Planner, 213-236-1908, vasishth@scag.ca.gov

SUBJECT: Application for EPA Grant for "Support for Local Activities to Quantify and Reduce Greenhouse Gas Emissions"

EXECUTIVE DIRECTOR'S APPROVAL:

RECOMMENDED ACTION:

Approve SCAG's application for a grant of up to $75,000 to fund a project to quantify regional emissions of Greenhouse Gases (GHG) and Urban Heat Island (UHI) mitigation measures during FY 03-04. No local match is required.

BACKGROUND:

The purpose of the grant program is to provide local governments, cities and communities who are interested in initiating planning efforts to mitigate the effects of global climate change and urban heat island mitigation with the tools and data needed to objectively quantify the potential benefits of various mitigation strategies. In general, both Greenhouse Gas (GHG) emissions—carbon dioxide and methane, as two examples—and the Urban Heat Island (UHI) effect—the placement of dark, impervious, heat absorbing surfaces such as roofs and asphalt paving—tend to increase the temperatures of ambient air. This increase in ambient temperature has various environmental effects, such as increased energy use for cooling and increased formation of ozone in the lower atmosphere, a criteria pollutant.

Planning efforts and interventions that reduce the formation of GHGs, such as by encouraging the co-location of housing with sources of employment and with shopping (mixed use development), thus reducing the vehicle miles needing to be traveled by commuters, mitigate the climate change effect. Similarly, planning efforts and interventions that reduce the heat absorbing impact of surfaces, by shading or by using lighter, less heat absorbing materials, will reduce ambient temperatures and thus reduce the formation of ozone. Even seemingly nominal reductions in temperature, perhaps in the order of two to four degrees, can have substantial air pollution reducing and energy consumption reducing benefits.

SCAG is proposing to generate an urban surface characterization that attempts to estimate the thermal properties of surfaces exposed to the sky (roofs and paving, weighted by rough approximations of tree densities), using remote sensing land cover and thermal data for urbanized areas in the region. This will be accompanied by the construction and testing of

modeling tools capable to providing quantified benefits of alternative patterns of urban development. In the latter case, SCAG's on-going growth visioning process, the Southern California Compass project, is expected to generate scenarios that depict alternative spatial patterns of development, which can then be used as a basis for estimating air quality and energy conservation benefits.

This specific grant application is expected to contribute primarily to SCAG's efforts to develop modeling tools to support GHG and UHI mitigation proposals that may be generated by local governments, cities and communities interested in pursuing such strategies.

FISCAL IMPACT:

The project is not expected to have a negative fiscal impact.